

	<i>C. humiæ.</i>	<i>C. burmannicus.</i>
Back and rump . . . . .	Each feather blue with a narrow white margin about one-tenth of an inch wide.	Each feather glossy black with a broad white margin about one-sixth of an inch wide.
Lower white wing-bar.	The concealed parts of the feathers, the tips of which form this bar, black.	The concealed parts of the feathers, the tips of which form this bar, chestnut with a firm black band between the chestnut and the white.
Black wing-bar . . . . .	Broad and uniformly black.	Imperfect, being mixed up with large patches of chestnut.
Mantle . . . . .	Upper part of mantle black; lower, maroon.	The whole mantle maroon.
Tail . . . . .	Only the middle pair of feathers distinctly barred with chestnut.	Not only the middle pair of feathers but the next four pairs distinctly barred with chestnut.

*Habitat.* The Ruby Mines district of Burma and the Southern Shan States.

#### X.—Further Notes on Tunisian Birds.

By JOSEPH I. S. WHITAKER, F.Z.S.

IN the spring of 1897 I made another short, but, from an ornithological point of view, not unfruitful trip in the Tunisian Regency, in the course of which I secured specimens of a few species of birds not previously recorded by me from Tunis, and obtained the nests and eggs of several interesting southern species. I was also able to verify one or two facts of some importance relating to the Ornis of this portion of North-west Africa, and generally to add to my knowledge of its avifauna.

The route I took this time varied in some measure from

that followed by me on previous occasions, for instead of going from Tunis to Tebessa, and then starting southward on my caravan journey, I took the new line of railway along the coast from Tunis to Sousa, and then struck inland, going first to the sacred city of Kairouan, and then across country to Gafsa. From this latter town I travelled westward as far as Oglet-Zellés, and then northward, crossing the mountains by Ain-Moularés, to Feriana, whence I went to Kasrin, and finally to Tebessa, where I took the rail to Tunis.

Among the birds new to my Tunisian collection, of which I obtained specimens on the present occasion or have received examples during the past twelvemonth from Blanc, the Tunis naturalist, I may mention the following species as being the most noteworthy:—*Turdus iliacus*, *T. torquatus*, *Chrysomitris spinus*, *Passer montanus*, *Chersophilus duponti*, *Caprimulgus ruficollis*, *Merops persicus*, *Coccyzus glandarius*, *Bubo ascalaphus*, *Nisäetus fasciatus*, *Falco peregrinus*, *F. eleonoræ*, *Columba palumbus*, *C. ænas*, *Turnix sylvatica*, *Porphyrio cæruleus*, *Otis houbara*, and *Stercorarius crepidatus*.

With regard to one of the species in the above list, viz. *Chersophilus duponti*, having this year had exceptional opportunity of observing and studying its habits and home life, I have the following remarks to make:—

In my notes on Tunisian birds (*Ibis*, 1895, p. 98) I mentioned having obtained a specimen of *C. margaritæ* (Koenig) at Saharidj, between Feriana and Gafsa, and in my subsequent notes (*Ibis*, 1896, p. 89), referring to the birds met with by Mr. Aplin in South Tunis, I again alluded to this Lark, observing that the specimens from the far south of the Regency were “all very rufous in colour, and still more so than the specimen obtained by myself last year.”

In the course of my recent journey in Tunisia I obtained specimens of what I consider to be the typical *C. duponti* (Vieill.), viz., dark-plumaged birds, differing considerably in shade of colouring from those from the far south of Tunisia, and also, although to a less extent, from that which I obtained between Feriana and Gafsa. In point of colour these Tunisian *C. duponti* lately found by me are slightly

darker than some skins I have from Algeria, and also than Loche's specimens in the Turati collection at Milan. On the other hand, they are not quite so dark as a specimen in my collection from Malaga, in Spain.

Like some other non-migratory species, this Lark seems to vary in its plumage-colouring according to the natural characteristics of the particular locality it may inhabit, and thus we find the extreme southern form differing greatly in this respect from the northern form, and sufficiently so, I think, to be separated from it as a subspecies. In measurements, I may mention, I find no difference between the above forms, the wing-measurement in some twenty specimens I have of this Lark in my collection varying from 4 to 4·2 inches in the case of males, and from 3·55 to 3·75 inches in that of females.

I found *C. duponti* not at all uncommon on the plains between Feriana and Kasrin, and I also met with it near El-Oubira, on the Algerio-Tunisian frontier. At Bou-Chebka, to the north of Feriana, it is also comparatively abundant, in fact it seems to occur throughout the greater part of the high-plateau region of Central Tunis, and I can only repeat what I wrote in 'The Ibis' for 1895, viz. : that this species "is not quite so uncommon as it is generally supposed to be, and that it is owing to the extraordinary capacity the bird has of hiding itself that it escapes notice, and is not more often got."

All the plains where I met with *C. duponti* were covered with wild thyme and other low-growing plants, affording ample cover for hiding, and in no case did I ever meet with this species on a bare spot ; indeed, I generally had the greatest difficulty in catching sight of the bird, although hearing its soft notes within a few yards of me. It is a great runner, and I only twice saw the bird on the wing. Its flight is low, rather feeble, and not prolonged, and so soon as it alights on the ground it runs off, and attempts to conceal itself in the thickest part of the herbage. I generally saw but one bird at a time ; only once did I see two together, probably a pair. Somewhat strange to say, the green, thyme-clad plains, so

much frequented by *C. duponti*, do not seem to be in equal favour with other species of birds, an occasional pair of Crested Larks being all that one may expect to meet with on them besides the present species, and even Crested Larks are wanting in certain districts. Occasionally some of these plains have a little alfa grass growing on them in patches, and here one may meet with the Lesser Bustard. The notes of *C. duponti*, as previously mentioned by me, are exceedingly soft and melodious; but I noticed that they differed somewhat this time from those I had heard on a former visit, when I was nearly a month earlier in the year. The notes I heard this time, so far as it is possible to transcribe them on to paper, are as follows:—a prolonged *twēē*, and then a soft *tee-wit-wār*, the last note in a lower key.

I was unsuccessful in finding a nest of this species myself, and, being pressed for a time, had to hurry home; but on my return I immediately sent back one of my men, accompanied by Blanc, the taxidermist, with full instructions as to where to hunt for nests. After two or three days of fruitless search they finally succeeded in finding a nest, with three fresh eggs in it, on the 15th May, near Bou-Chebka, on the Hauts Plateaux, at an elevation of over 3000 feet above sea-level. The hen bird was secured at the same time from off the nest, which was placed at the foot of a tuft of wild thyme, and sunk rather deeply into the ground. The nest, which was brought me, together with the eggs, seems rather small for the size of the bird, although of fair depth. It is composed of soft bents, chiefly of *Anthemis mixta*, with little or no lining. The eggs all differ somewhat one from the other. The following is a description of them:—

- a. Glossy greyish-white ground, plentifully spotted, and blotched all over, but particularly at the larger end, with grey shell-markings and yellow-brown surface-spots. Measurements: 24 × 18 mm.
- b. Glossy greyish-white ground; shell-markings grey and very plentiful, surface-spots faint yellow-brown, and few. Rather more thickly spotted at larger end. Shape of this egg more pear-like than the others. Measurements: 25 × 17·5 mm.

c. Greyish-white ground; very evenly covered all over with minute spots of a grey and faint yellow-brown colour; not a single large spot or blotch; in fact the colour of the egg, at a little distance, seems of an uniform greenish tinge. Measurements:  $24 \times 17.5$  mm.

Besides the above-described nest and eggs of *C. duponti*, my men found two other nests at Bou-Chebka, each with three young birds, just hatched, which they concluded were of this species as they saw no other birds in this particular locality except *C. duponti*. This would imply that the normal full complement of eggs is three. A young bird of this species, a few weeks old, was also obtained at Bou-Chebka. I believe the only previously recorded instance of the nest and eggs of this Lark having been obtained is that mentioned in Dresser's 'Birds of Europe,' vol. iv. p. 279.

Of the nests and eggs obtained by me during my late trip, other than those of *C. duponti*, the following are among the most interesting, viz. :—*Saxicola mæsta*, *S. leucura*, *Argya fulva*, *Erythrospiza githaginea*, *Emberiza saharae*, *Otis tetrax*, and *O. houbara*. Besides these, I obtained several nests and eggs of the different forms of Crested Larks, and of Short-toed Larks, as also of Ravens, Magpies, Grey Shrikes, and of the commoner species of Raptores.

With regard to the nesting of *Saxicola mæsta*, comparatively little has previously been recorded, Canon Tristram, I believe, being the only one who has hitherto been fortunate enough to find the nest and eggs of this bird ('Ibis,' 1859, p. 299, 'Birds of Europe,' vol. ii. p. 227). I propose, therefore, giving a description of the nests and eggs I found of this species, and of its breeding-habits generally, so far as I was able to observe them.

Of this Chat I took three nests, two of them near Ras-el-Aioum, a district about 25 miles to the west of Gafsa, and a third at Oglet-Zellés, a few miles still further west. Ras-el-Aioum is situated at the extreme south of the Haut Plateau, which is bounded on the north by the high range of mountains forming the natural frontier between Algeria and

Tunisia, and on the south by the lower range, beyond which lies the desert country of the Chotts. The elevation of this district is about 1200 feet above sea-level, and the character of the country is of the semi-desert description, with stony plains, covered with a scanty scrub vegetation, although, owing to its proximity to the southern range of hills, there is much broken ground and numerous watercourses, dry as a rule, intersecting the plain. In the immediate vicinity of Ras-el-Aioum, through which flows the Oued Seldja, the vegetation is of a less stunted nature, and by the river-banks there is a thick growth of tamarisks and oleanders, the favourite haunt of many birds. Oglet-Zellés stands a little higher than Ras-el-Aioum, and, being situated near the centre of the plain, has a more open and less broken country, but in other respects the two districts resemble each other.

The first nest taken at Ras-el-Aioum I found on the 13th April. It was placed in a hole at the foot of a low marl cliff, a bare spot, destitute of vegetation. The hole, which was just large enough to admit the easy passage of the bird, extended nearly a yard in length, in a horizontal direction, with a bend about halfway. The nest, placed at the further extremity of the hole, was cup-shaped, and fairly large for the size of the bird. It was composed exteriorly of coarse grass-bents, rather loosely put together, with finer and softer grass inside, and lined plentifully with wool and hair, both camels' and goats'. The eggs, which unfortunately were rather hard to get, were five in number, and of a very delicate, pale greenish blue, sparsely spotted, and principally at the larger end, with spots of a pale lake-colour. The following are the dimensions of three of the eggs which I measured:—(a)  $24 \times 17$  mm.; (b)  $23 \times 16$  mm.; (c)  $24 \times 16$  mm.

The second nest, also taken at Ras-el-Aioum on the 13th of April, was placed in a hole in a marl cliff, like the first; but as this cliff formed one of the banks of a dry water-course, the hole was about five feet from the ground, or bed of the stream, a providential instinct having no doubt taught the bird to avoid a possible catastrophe. As in the first

instance, this hole extended nearly a yard in length in a horizontal direction, but without any bend. The nest and eggs, of which there were again five, apparently the full complement, resembled those previously found. These eggs were also somewhat incubated. I did not measure any of them, but they appeared identical with the first clutch. In digging out this nest I unearthed a rather large scorpion, which made me wonder how these birds can bring up their young safely, exposed as they are, particularly those nesting in holes in the ground, to so many dangers.

The third nest I took at Oglet-Zellés on the 17th April. In this instance the hole, which was probably the deserted home of some small rodent, was in almost level ground, where a few scrub plants served to hold the light crumbling soil together. Like the other two, this hole extended about a yard in length, but in a slightly oblique downward direction. This nest contained only four eggs, very slightly incubated. In colour they resembled those previously found, but the spots were fewer and more minute, in one egg being almost entirely wanting, in another the few there were being collected in a zone at the larger end. In shape these eggs were more oval than those of the other two clutches. The following are the measurements of two of them :—(a)  $24 \times 15.5$  mm. ; (b)  $23 \times 16$  mm.

I secured the hen-bird in each instance, after having seen her enter and leave her nest-hole, and in two of the cases I shot what was presumably the cock-bird as well. I doubt the male parent taking much, if any, part in the incubation of the eggs, as, although generally to be seen in the immediate vicinity of the nest, I failed to observe it enter, or leave the hole in any one of the three cases I have mentioned. The fact also of the male birds being so much oftener seen during the breeding-season than the females would tend to support this supposition, allowing even for the more conspicuous plumage of the former.

*Saxicola mæsta* is, without doubt, an early breeder, and has more than one brood in the course of the season, young birds of this species, fully fledged and able to fly, being met

with at the beginning of April, or even earlier, and probably the three clutches of eggs found by me were all of a second laying. At Ras-el-Aioum I shot a young male *S. mæsta* on the 13th April, which must have been nearly two months old, and at Oglet-Zellés I saw two or three young broods of this species shifting for themselves at the middle of April.

In the course of my late journey I again met with and secured specimens of *Sylvia deserticola*, *Loxia curvirostra*, *Cypselus affinis*, *Pterocles coronatus*, and of other interesting species which I have previously recorded from Tunisia.

The Sparrows in some parts of the Regency again puzzled me a little, owing to cases of evident hybridism. I have, however, now no longer any hesitation in saying that *Passer salicicola* is the common Sparrow of the country, being found generally throughout the whole of Tunisia, while *P. domesticus*, so far as I have been able to ascertain, occurs, at present, only in the more western districts of the Regency, to which it has probably spread from Algeria. The railway has no doubt been instrumental in contributing towards this diffusion, and it is not unlikely we shall, at no distant date, find *P. domesticus* quite at home in the town of Tunis, and in other places in the east of the Regency, where it appears now to be wanting.

Where the two species *P. domesticus* and *P. salicicola* meet, they seem to interbreed freely, so much so that in some of the villages of Western Tunisia a bastard race appears to have been formed, partaking of the characters of both species.

With regard to *P. italiae*, I am still unable to state positively that it occurs in Tunisia. I have specimens in my collection from Tunis, which certainly resemble this species more than either of the other two; but I cannot say I have yet come across a typical *P. italiae* in the Regency.

Finally it may be mentioned that I found the Grey Shrikes, in certain districts of Central Tunis not previously visited by me, varying in shade of plumage-colouring and in markings between *Lanius algeriensis* and *L. elegans*, but with regard to these I propose making some remarks in a separate paper.